ABSTRACT

A process for producing an organotitanium compound capable of regioselectively converting a substituted acetylene compound into polysubstituted benzene or polysubstituted pyridine. The process comprises reacting an acetylene compound represented by the formula (1)

$$R^1 - - R^2$$
 (1)

[where R^1 and R^2 denote a C_{1-20} alkyl group or the like] in the presence of a prescribed titanium compound and a Grignard reagent with a compound represented by the formula (4)

$$R^3 \overline{\qquad} R^4 \tag{4}$$

[where R³ and R⁴ denote a hydrogen atom or the like] and further reacting with a compound represented by the formula (5)

$$Z = \begin{pmatrix} R^5 \\ X^6 \end{pmatrix}$$
 (5)

[where R⁵ denotes a hydrogen atom or the like, Z denotes CR'

(where R' denotes a hydrogen atom or the like), nitrogen

atom, X⁶ denotes a halogen atom or the like, and m is 0 or

1]

thereby giving the titanium compound represented by the formula (6) and/or (7).

[where R^1 ~ R^5 , Z, X^6 , and m are defined as above; and X^p and X^q denote any of X^1 ~ X^4].